## Social Support May Aid Women with Ovarian Cancer





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MONDAY, June 13 (HealthDay News) -- Women with ovarian cancer who have social support from loved ones have lower levels of an inflammatory protein released by the immune system, which could mean a more favorable prognosis, new research suggests.

At high levels, the protein called interleukin-6, or IL-6, is linked with a poorer outcome for ovarian cancer patients, said Erin Costanzo, a graduate fellow in psychology at the University of Iowa.

She is the lead author of the study, published in the July 15 issue of *Cancer*, which evaluated the IL-6 levels of 61 women with advanced ovarian cancer.

"The closer the women's social attachment, the lower their IL-6, on a kind of continuum," Costanzo said. For the study, social attachment was defined as having at least one other person with whom you have a close connection in your life.

In other studies, IL-6 has been shown to promote tumor growth and to be associated with a poor prognosis in ovarian cancer patients, with elevated levels linked with higher death rates and higher rates of cancer spread to other areas of the body.

"We gave them [the study participants] a battery of psychosocial measures and looked at their mood, their health-related quality of life, their physical well-being, how well they do in day-to-day activities, and looked at their social support," Costanzo said.

The women answered questions about their current relationships and how well they felt these relationships met their needs for closeness, intimacy, nurturance and other factors.

The team measured IL-6 in the blood and in the area around the tumor, Costanzo said.

In general, the IL-6 levels were elevated, she said. But women reporting low social support had 1.7 times more IL-6 in the blood and 2.5 times more in the area around the tumor than women with greater social support.

Costanzo emphasized that the study did not look at the association between IL-6 levels and how those levels affected survival. "Basically the next step would be to follow patients and look at survival." she said.

While other studies have looked at psychosocial factors and IL-6 levels, Costanzo said as far as her research team knows, this study is the first to look at IL-6 and ovarian cancer.

IL-6 is produced by several sources in the body, according to Costanzo, including endothelial cells and ovarian tumor cells. In healthy people, IL-6 is low, but it tends to rise with age and in ovarian cancer patients.

Another expert, Dr. Willard Barnes, director of gynecologic oncology at Georgetown University Hospital in Washington, D.C., called the new study "fascinating."

Yet Barnes also cautioned that the research is not saying there is a correlation between IL-6 levels and survival from ovarian cancer. "This is good clinical research that can be used for further research" to determine the clinical significance, he said.

An estimated 22,220 women will learn they have ovarian cancer in 2005, according to the American Cancer Society, and about 16,210 women are expected to die from the disease this year.

The exact cause of ovarian cancer is not yet known, but several risk factors have been identified. They include age, with half of ovarian cancers found in women over age 65; obesity; and family history.

In early stages, ovarian cancer has symptoms that can be vague, such as abdominal swelling, unusual vaginal bleeding, back or leg pain, as well as indigestion or stomach pain, according to the American Cancer Society.

## More information

To learn more about ovarian cancer, visit the **American Cancer Society**.